

1 **METHOD AND APPARATUS FOR SEPARATING IMPURITIES FROM A LIQUID**

2 **ABSTRACT OF THE DISCLOSURE**

3 A liquid having certain undesired elements therein is
4 distilled in a distillation column to form a vapor stream.
5 This vapor stream is fed by means of an inert gas drive to a
6 first container having an array of semi-permeable screens
7 which are rotated at a speed of 3,000-10,000 rpm to generate
8 vertical spiral vortexes which act on the vapor to separate
9 out heavier impurities. An inert gas is employed to drive the
10 vapor stream from the first container to the bottom of a
11 second container having a narrower diameter array of
12 semi-permeable screens, these screens being driven at a
13 velocity of 6000-100,000 rpm. In the second container, the
14 molecular species is separated from the main vapor stream by
15 virtue of the exposure of the vapor to large centrifugal
16 gravity forces generated by the horizontal velocity vectors of
17 the rotating screens. The more volatile first fraction of
18 vapor exits the column to a condenser where it is transformed
19 to liquid form and provides the output of the system while the
20 second less volatile fraction of the vapor is fed to the
21 bottom of the array from where it is exited.
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